

CLAIMS

1 A device for expressing fluid from a tube by drawing the tube through the nip
formed between a first roller and a second roller respectively having first and
5 second axes, the second roller being moveable toward the first to form the nip and
away from the first to facilitate placement and removal of the tube from between the
rollers, the device being characterized in that:

the second roller is mounted for movement toward and away from the first
roller in a direction that is at an angle to the plane containing the axes of the rollers;
10 that is, in a direction that is not coplanar with the axes of the rollers.

2 A device for expressing fluid from a tube according to claim 1 wherein said
angle is between 30 and 90 degrees when the nip between the rollers is formed.

15 3 A device for use in stripping fluid from a length of tube, the device having
first and second rollers that are respectively rotatable about first and second axes
of rotation and which can be brought together on opposite sides of the tube to form
a nip between the rollers and a pinch-point in the tube, and the device having drive
means for rotating at least one of the rollers so as to move the pinch-point
20 longitudinally along the tube to expel fluid from the tube, the device being
characterized in that:

the rollers are brought together to form the nip by moving the second roller
toward the first in a direction that has a longitudinal component with respect to the
tube, when the device is in use.

25

4 A device according to any preceding claim wherein:

the device has a body that includes a frame,

the first and second rollers are mounted on the frame so as to extend
cantilever-fashion from the body,

30 first drive means is provided within the body and fixed to the frame for
rotating the first roller about its axis, the axis of the first roller being fixed with
respect to the frame,

10

the second roller is an idle roller mounted for free rotation about its axis on mounting means that is moveable with respect to the frame so as to be adapted to move the second roller relative to the first roller, and

second drive means is provided within the body and fixed to the frame, said
5 second drive means being adapted to move said mounting means, together with the second roller mounted thereon, with respect to the frame.

5 A device according to claim 4 wherein:

the first roller is mounted for rotation by a shaft that extends from one end of
10 the roller and is coupled to the first drive means so that the first roller can be rotated by the shaft,

said mounting means is in the form of a yoke that straddles said shaft, the yoke having two opposing arms with the shaft arranged therebetween and the yoke being slidably mounted on the frame within the body,

15 the second roller is mounted on one of said arms of the yoke, and

said second drive means is coupled to the other arm of the yoke to effect the movement of the mounting means.

6 A device according to claim 5 wherein:

20 a leadscrew is mounted for rotation on the frame and is engaged with a nut that is secured to said other arm of the yoke so that rotation of the leadscrew will effect movement of the mounting means and the second roller relative to the frame,

said second drive means is rotatably coupled to the leadscrew so as be able to rotate the leadscrew in one direction so as to move the yoke to carry the second
25 roller toward the first roller and in the other direction so as to move the yoke to carry the second roller away from the first roller.

7 A device according to claim 6 wherein:

a worm wheel is fitted to one end of the leadscrew and a worm that engages
30 the leadscrew is fitted to a second shaft that is coupled to the second drive means for rotation thereby in either direction.

8 A device according to any preceding claim wherein:

a guide is provided for constraining the lateral movement of the tube and for ensuring its longitudinal movement.